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TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 SEP 09 CA/CAPLUS records now contain indexing from 1907 to the
present
NEWS 4 DEC 08 INPADOC: Legal Status data reloaded
NEWS 5 SEP 29 DISSABS now available on STN
NEWS 6 OCT 10 PCTFULL: Two new display fields added
NEWS 7 OCT 21 BIOSIS file reloaded and enhanced
NEWS 8 OCT 28 BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS 9 NOV 24 MSDS-CCOHS file reloaded
NEWS 10 DEC 08 CABA reloaded with left truncation
NEWS 11 DEC 08 IMS file names changed
NEWS 12 DEC 09 Experimental property data collected by CAS now available
in REGISTRY
NEWS 13 DEC 09 STN Entry Date available for display in REGISTRY and CA/CAPLUS
NEWS 14 DEC 17 DGENE: Two new display fields added
NEWS 15 DEC 18 BIOTECHNO no longer updated
NEWS 16 DEC 19 CROPU no longer updated; subscriber discount no longer
available
NEWS 17 DEC 22 Additional INPI reactions and pre-1907 documents added to CAS
databases
NEWS 18 DEC 22 IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS 19 DEC 22 ABI-INFORM now available on STN

NEWS EXPRESS DECEMBER 28 CURRENT WINDOWS VERSION IS V7.00, CURRENT
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:21:30 ON 07 JAN 2004

=> file biosis

COST IN U.S. DOLLARS

SINCE FILE
ENTRY

TOTAL
SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'BIOSIS' ENTERED AT 13:21:38 ON 07 JAN 2004
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNS) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 31 December 2003 (20031231/ED)

FILE RELOADED: 19 October 2003.

=> s ((calculat? or measure? or determin? or evaluat? or detect? or quantif? or
analy?) (3w) amine)

238056 CALCULAT?
1065198 MEASURE?
1371383 DETERMIN?
860482 EVALUAT?
909534 DETECT?
108857 QUANTIF?
2062918 ANALY?
34117 AMINE
22007 AMINES
51442 AMINE

(AMINE OR AMINES)

L1 1402 ((CALCULAT? OR MEASURE? OR DETERMIN? OR EVALUAT? OR DETECT? OR
QUANTIF? OR ANALY?) (3W) AMINE)

=>

=> s l1 same (ion)

MISSING OPERATOR L1 SAME

The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l1 (p) ion

214764 ION
79206 IONS
267529 ION

(ION OR IONS)

L2 120 L1 (P) ION

=> s l2 and (prognosis or diagnosis)

99513 PROGNOSIS
1 PROGNOSISES
1563 PROGNOSES
100382 PROGNOSIS
(PROGNOSIS OR PROGNOSISES OR PROGNOSES)
589828 DIAGNOSIS
5 DIAGNOSISES
23783 DIAGNOSES
601490 DIAGNOSIS

(DIAGNOSIS OR DIAGNOSISES OR DIAGNOSES)

L3 1 L2 AND (PROGNOSIS OR DIAGNOSIS)

=> d l3 kwic

L3 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Novel application for ion mobility spectrometry: Diagnosing
vaginal infections through measurement of biogenic
amines.

AB A method for diagnosis of bacterial vaginosis (BV) and other
vaginal infections, based on measurement of biogenic
amines present in a sample of vaginal fluid by ion

mobility spectrometry (IMS) was developed. Sample introduction is through a two step procedure: addition of alkaline solution to release the . . . biological matrices. A software package was developed for acquisition, storage and processing of the mobility spectra and for providing a **diagnosis** based on a table of rules. We report the results from testing of 210 samples of vaginal discharge fluid that. . .

IT . . .
IT Parts, Structures, & Systems of Organisms
 vaginal fluid: reproductive system
IT Diseases
 bacterial vaginosis: bacterial disease, reproductive system
 disease/female, **diagnosis**
 Vaginosis, Bacterial (MeSH)
IT Diseases
 trichomoniasis: parasitic disease
 Trichomonas Infections (MeSH)
IT Chemicals & Biochemicals
 biogenic amine

=> s l2 and (vagin?)
 42495 VAGIN?
L4 1 L2 AND (VAGIN?)

=> d l4 ti

L4 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Novel application for **ion** mobility spectrometry: Diagnosing
 vaginal infections through **measurement** of biogenic
 amines.

=> s (l1 (p) (ion (w) mobility))
 214764 ION
 79206 IONS
 267529 ION
 (ION OR IONS)
 52222 MOBILITY
 4713 MOBILITIES
 55499 MOBILITY
 (MOBILITY OR MOBILITIES)
L5 4 (L1 (P) (ION (W) MOBILITY))

=> d l5 kwic 1-4

L5 ANSWER 1 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI Novel application for **ion mobility** spectrometry:
 Diagnosing vaginal infections through **measurement** of biogenic
 amines.
AB A method for diagnosis of bacterial vaginosis (BV) and other vaginal
 infections, based on **measurement** of biogenic **amines**
 present in a sample of vaginal fluid by **ion mobility**
 spectrometry (IMS) was developed. Sample introduction is through a two
 step procedure: addition of alkaline solution to release the volatile. .
 .

L5 ANSWER 2 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI **Detection** of biogenic **amines** in foods using
 ion mobility spectrometry and chemometrics.

L5 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI **Determination** of volatile biogenic **amines** in muscle
 food products by **ion mobility** spectrometry.
AB The extent of spoilage of muscle food products was determined through
 measurement of volatile biogenic **amines** that emanated

from food samples. The release of the amines was enhanced by addition of a few drops of an alkaline solution and the amines were monitored by **ion mobility** spectrometry (IMS). The limit of detection of the method for trimethylamine (TMA) was 2 ng and the measurement was completed. . . examined, and as expected, the higher the storage temperature the faster the spoilage. Thus, this pilot study shows that the **measurement** of biogenic **amines** can serve as an indicator for food spoilage or freshness.

L5 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN AB. . . sensitive registration and identification of the organic nitrogen base molecules in air and in mixtures of compounds for their chromatographic, **ion mobility** and mass-spectrometric analysis are presented. The main principles of the SI registration and identification of molecules are considered. The requirements. . . of the development of the effective and stable emitters, the simple-in-design diode SI detectors, the gas-chromatographic detectors, the SI gas **analyzers** of **amines** and the indicators and analyzers of narcotics including portable ones, SI **ion mobility** spectrometer and SI mass spectrometer are presented. They have a unique selectivity (up to 105-108 with respect to organic solvents). . .

=> d 15 1-4 iall

L5 ANSWER 1 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 2003:66651 BIOSIS
DOCUMENT NUMBER: PREV200300066651

TITLE: Novel application for **ion mobility**
spectrometry: Diagnosing vaginal infections through
measurement of biogenic **amines**.
AUTHOR(S): Karpas, Zeev [Reprint Author]; Chaim, Walter; Gdalevsky,
Rachel; Tilman, Boris; Lorber, Avi
CORPORATE SOURCE: Department of Analytical Chemistry, Nuclear Research
Center, P.O. Box 9001, Beer-Sheva, 84190, Israel
karpas4@netvision.net.il
SOURCE: Analytica Chimica Acta, (9 December 2002) Vol. 474, No.
1-2, pp. 115-123. print.
ISSN: 0003-2670 (ISSN print).

DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 29 Jan 2003
Last Updated on STN: 29 Jan 2003

ABSTRACT: A method for diagnosis of bacterial vaginosis (BV) and other vaginal infections, based on **measurement** of biogenic **amines** present in a sample of vaginal fluid by **ion mobility** spectrometry (IMS) was developed. Sample introduction is through a two step procedure: addition of alkaline solution to release the volatile amines followed by heating and acid addition for emanation of the semi-volatile amines. Addition of n-nonylamine vapors to the carrier gas stream helps control the ionization processes and enhances the selective response to amines, even in the complex environment of biological matrices. A software package was developed for acquisition, storage and processing of the mobility spectra and for providing a diagnosis based on a table of rules. We report the results from testing of 210 samples of vaginal discharge fluid that were diagnosed by a gynecologist according to the widely used reference method (Amsel test) and by the new IMS method. The new method is rapid (less than 2 min per sample), has a high sensitivity (few False Negatives) and specificity (few False Positives) with an accuracy of >95% for BV. The use of this method can reduce the incidence of misdiagnosis, particularly when trichomoniasis is confused with bacterial vaginosis.

CONCEPT CODE: Pathology - Diagnostic 12504
Reproductive system - Physiology and biochemistry 16504
Reproductive system - Pathology 16506
Medical and clinical microbiology - Bacteriology 36002

Applicant

Parasitology - Medical 60504

INDEX TERMS: Major Concepts
Gynecology (Human Medicine, Medical Sciences);
Infection; Methods and Techniques

INDEX TERMS: Parts, Structures, & Systems of Organisms
vaginal fluid: reproductive system

INDEX TERMS: Diseases
bacterial vaginosis: bacterial disease, reproductive
system disease/female, diagnosis
Vaginosis, Bacterial (MeSH)

INDEX TERMS: Diseases
trichomoniasis: parasitic disease
Trichomonas Infections (MeSH)

INDEX TERMS: Chemicals & Biochemicals
biogenic amine

INDEX TERMS: Methods & Equipment
ion mobility spectrometry: clinical techniques,
diagnostic techniques, spectrum analysis techniques;
Amsel test: clinical techniques, diagnostic techniques

ORGANISM: Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human (common): host, female
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates,
Vertebrates

L5 ANSWER 2 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 2002:521328 BIOSIS

DOCUMENT NUMBER: PREV200200521328

TITLE: **Detection of biogenic amines in foods**
using **ion mobility spectrometry** and
chemometrics.

AUTHOR(S): Harrington, Peter de B. [Reprint author]; Schmitt, Nicholas
C.; Atkinson, David A.; Ewing, Robert G.

CORPORATE SOURCE: Department of Chemistry and Biochemistry, Center for
Intelligent Chemical Instrumentation, Clippinger
Laboratories, Ohio University, Athens, OH, 45701, USA
Peter.Harrington@Ohio.edu

SOURCE: Abstracts of Papers American Chemical Society, (2002) Vol.
224, No. 1-2, pp. AGFD 192. print.
Meeting Info.: 224th National Meeting of the American
Chemical Society. Boston, MA, USA. August 18-22, 2002
CODEN: ACSRAL. ISSN: 0065-7727.

DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 9 Oct 2002
Last Updated on STN: 9 Oct 2002

CONCEPT CODE: General biology - Symposia, transactions and proceedings
00520
Food technology - General and methods 13502

INDEX TERMS: Major Concepts
Foods; Methods and Techniques

INDEX TERMS: Chemicals & Biochemicals
biogenic amines; cadaverine; putrescine

INDEX TERMS: Methods & Equipment
ion mobility spectrometry: analytical method

INDEX TERMS: Miscellaneous Descriptors
chemometrics; food products: flavor, quality, spoilage;
food safety; Meeting Abstract

REGISTRY NUMBER: 462-94-2 (cadaverine)
110-60-1 (putrescine)

L5 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 ACCESSION NUMBER: 2002:520747 BIOSIS
 DOCUMENT NUMBER: PREV200200520747
 TITLE: **Determination of volatile biogenic amines** *Applicant*
 in muscle food products by ion mobility
 spectrometry.
 AUTHOR(S): Karpas, Zeev [Reprint author]; Tilman, Boris; Gdalevsky,
 Rachel; Lorber, Avraham
 CORPORATE SOURCE: Analytical Chemistry Department, Nuclear Research Center,
 Negev, P.O. Box 9001, Beer-Sheva, 84190, Israel
 karpas4@netvision.net.il
 SOURCE: Analytica Chimica Acta, (22 July, 2002) Vol. 463, No. 2,
 pp. 155-163. print.
 CODEN: ACACAM. ISSN: 0003-2670.
 DOCUMENT TYPE: Article
 LANGUAGE: English
 ENTRY DATE: Entered STN: 9 Oct 2002
 Last Updated on STN: 9 Oct 2002
 ABSTRACT: The extent of spoilage of muscle food products was determined through
 measurement of volatile biogenic amines that emanated from
 food samples. The release of the amines was enhanced by addition of a few
 drops of an alkaline solution and the amines were monitored by ion
 mobility spectrometry (IMS). The limit of detection of the method for
 trimethylamine (TMA) was 2 ng and the measurement was completed within <2 min
 with short and long term reproducibility of 15 and 25%, respectively, for
 replicate samples. The method provides qualitative information as it
 distinguishes between different amines, as well as quantitative data for the
 key compounds. A good correlation was found between the IMS results and the
 microorganism populations in microbiological cultures. The effects of storage
 time and temperature and of the type of meat on the formation of biogenic
 amines were examined, and as expected, the higher the storage temperature the
 faster the spoilage. Thus, this pilot study shows that the **measurement**
 of biogenic amines can serve as an indicator for food spoilage or
 freshness.
 CONCEPT CODE: Food technology - General and methods 13502
 Food technology - Meats and meat by-products 13516
 Muscle - Physiology and biochemistry 17504
 INDEX TERMS: Major Concepts
 Foods; Methods and Techniques
 INDEX TERMS: Parts, Structures, & Systems of Organisms
 muscle: muscular system
 INDEX TERMS: Chemicals & Biochemicals
 trimethylamine; volatile biogenic amines: determination
 INDEX TERMS: Methods & Equipment
 ion mobility spectrometry: Spectrum Analysis Techniques,
 determination method
 INDEX TERMS: Miscellaneous Descriptors
 food spoilage; muscle food product: meat product
 REGISTRY NUMBER: 75-50-3 (trimethylamine)

L5 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 ACCESSION NUMBER: 2000:540557 BIOSIS
 DOCUMENT NUMBER: PREV200000540557
 TITLE: Surface-ionization methods and devices of indication and
 identification of nitrogen-containing base molecules.
 AUTHOR(S): Rasulev, U. Kh. [Reprint author]; Khasanov, U.; Palitcin,
 V. V.
 CORPORATE SOURCE: Arifov Institute of Electronics, Uzbek Academy of Sciences
 Academgorodok, F. Khojaeva 33, 700143, Tashkent:
 root@ariel.tashkent.su, Uzbekistan
 SOURCE: Journal of Chromatography A, (27 October, 2000) Vol. 896,
 No. 1-2, pp. 3-18. print.
 CODEN: JOCRAM. ISSN: 0021-9673.
 DOCUMENT TYPE: Article

LANGUAGE: English
ENTRY DATE: Entered STN: 13 Dec 2000
Last Updated on STN: 11 Jan 2002

ABSTRACT: The results of the development of methods and devices based on the effect of surface ionization (SI) and intended for the selective and sensitive registration and identification of the organic nitrogen base molecules in air and in mixtures of compounds for their chromatographic, ion

mobility and mass-spectrometric analysis are presented. The main principles of the SI registration and identification of molecules are considered. The requirements that must be satisfied by devices implementing these principles are stated. The examples of the development of the effective and stable emitters, the simple-in-design diode SI detectors, the gas-chromatographic detectors, the SI gas analyzers of amines and the indicators and analyzers of narcotics including portable ones, SI ***ion*** mobility spectrometer and SI mass spectrometer are presented. They have a unique selectivity (up to 10⁵-10⁸ with respect to organic solvents) and ionization efficiency (up to approx 20-100%) of amines and their derivatives, including the degradation products of chemical warfare agents, tobacco alkaloids, triazine herbicides, narcotics and other abused medicinal preparations, as well as the sensitivity of up to 6 C/g and picogram level detection limits with a response dynamic range of 5-8 orders of magnitude.

CONCEPT CODE: Biochemistry studies - General 10060

INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Equipment, Apparatus, Devices and Instrumentation; Methods and Techniques

INDEX TERMS: Chemicals & Biochemicals
abused medicinal preparations; amines: derivatives; base molecules: identification, nitrogen-containing, registration; chemical warfare agents: degradation products; mixtures of compounds; narcotics: degradation products; tobacco alkaloids: degradation products; triazine herbicides: degradation products

INDEX TERMS: Methods & Equipment
DB-5 capillary columns: J&W, laboratory equipment; HP-5890 chromatograph: Hewlett-Packard, laboratory equipment; chromat-mass spectrometer HP-6890: Hewlett-Packard, laboratory equipment; chromatography: Chromatographic Techniques, analytical method; gas-chromatographic detectors: laboratory equipment; ion mobility spectrometry: Spectrum Analysis Techniques, analytical method; magnetic mass spectrometer MI-1201V: NPO Elektron, laboratory equipment; mass-spectrometry: Spectrum Analysis Techniques, analytical method; model 3 LKhM-8MD chromatograph: OKBA, laboratory equipment; model 550 Tsvet-500M chromatograph: OKBA, laboratory equipment; series 104 Pay-Unicam chromatograph: Hewlett-Packard, laboratory equipment; simple-in-design diode surface ionization detectors: laboratory equipment; surface ionization gas analyzers: laboratory equipment; surface ionization ion mobility spectrometer: laboratory equipment; surface ionization mass spectrometer: laboratory equipment; surface-ionization: Spectrum Analysis Techniques, analytical method; surface-ionization devices: laboratory equipment

INDEX TERMS: Miscellaneous Descriptors
air; ionization efficiency

=> s (l1 and (ion (w) mobility)

UNMATCHED LEFT PARENTHESIS '(L1'

The number of right parentheses in a query must be equal to the number of left parentheses.

```
=> s (l1 and (ion (w) mobility))
    214764 ION
    79206 IONS
    267529 ION
        (ION OR IONS)
    52222 MOBILITY
    4713 MOBILITIES
    55499 MOBILITY
        (MOBILITY OR MOBILITIES)
    266 ION (W) MOBILITY
L6      4 (L1 AND (ION (W) MOBILITY))
```

```
=> d l6 ti 1-4
```

```
L6      ANSWER 1 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI      Novel application for ion mobility spectrometry:
        Diagnosing vaginal infections through measurement of biogenic
        amines.
```

```
L6      ANSWER 2 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI      Detection of biogenic amines in foods using
        ion mobility spectrometry and chemometrics.
```

```
L6      ANSWER 3 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI      Determination of volatile biogenic amines in muscle
        food products by ion mobility spectrometry.
```

```
L6      ANSWER 4 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
TI      Surface-ionization methods and devices of indication and identification of
        nitrogen-containing base molecules.
```

```
=> s (l1 and spectrometry)
    86516 SPECTROMETRY
    92 SPECTROMETRIES
    86575 SPECTROMETRY
        (SPECTROMETRY OR SPECTROMETRIES)
L7      122 (L1 AND SPECTROMETRY)
```

```
=> s l7 and (prognosis or diagnosis or disease or patholog? or condition)
    99513 PROGNOSIS
    1 PROGNOSISES
    1563 PROGNOSES
    100382 PROGNOSIS
        (PROGNOSIS OR PROGNOSISES OR PROGNOSES)
    589828 DIAGNOSIS
    5 DIAGNOSISES
    23783 DIAGNOSES
    601490 DIAGNOSIS
        (DIAGNOSIS OR DIAGNOSISES OR DIAGNOSES)
    2227397 DISEASE
    1536285 DISEASES
    2389522 DISEASE
        (DISEASE OR DISEASES)
    1468485 PATHOLOG?
    137613 CONDITION
    609164 CONDITIONS
    718370 CONDITION
        (CONDITION OR CONDITIONS)
L8      24 L7 AND (PROGNOSIS OR DIAGNOSIS OR DISEASE OR PATHOLOG? OR CONDIT
        ION)
```

```
=> s l8 and ion
    214764 ION
    79206 IONS
```


267529 ION

(ION OR IONS)

L9 7 L8 AND ION

=> d l9 1-7 kwic

L9 ANSWER 1 OF 7 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
AB. . . a mixed cation exchange reversed-phase resin. The identity of 4-ABP
was confirmed by both HPLC with electrospray ionization tandem mass
spectrometry (HPLC-ESI-MS/MS) and gas chromatography with negative
ion chemical ionization mass **spectrometry** (GC-NICI-MS)
following chemical derivatization with pentafluoropropionic anhydride
(PFPA). The levels of 4-ABP ranged from not detectable (<0.29 parts per
billion. . . is present in some hair dyes. Studies on dermal
absorption and bioavailability of 4-ABP from hair dyes are required to
determine if this aromatic **amine** contributes to the
increased risk of bladder cancer reported in frequent users of hair dyes.

IT Major Concepts

Cosmetics; Toxicology; Tumor Biology

IT Diseases

bladder cancer: neoplastic **disease**, urologic **disease**

Bladder Neoplasms (MeSH)

IT Chemicals & Biochemicals

1,4-phenylenediamine; 4-aminobiphenyl: carcinogen; DNA adducts;
aminobiphenyl derivatives: identification; commercial hair dyes;
hexane; pentafluoropropionic anhydride

L9 ANSWER 2 OF 7 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Novel application for **ion** mobility **spectrometry**:

Diagnosing vaginal infections through **measurement** of biogenic
amines.

AB A method for **diagnosis** of bacterial vaginosis (BV) and other
vaginal infections, based on **measurement** of biogenic
amines present in a sample of vaginal fluid by **ion**
mobility **spectrometry** (IMS) was developed. Sample introduction
is through a two step procedure: addition of alkaline solution to release
the volatile amines. . . biological matrices. A software package was
developed for acquisition, storage and processing of the mobility spectra
and for providing a **diagnosis** based on a table of rules. We
report the results from testing of 210 samples of vaginal discharge fluid
that. . .

IT . . .

Infection; Methods and Techniques

IT Parts, Structures, & Systems of Organisms

vaginal fluid: reproductive system

IT Diseases

bacterial vaginosis: bacterial **disease**, reproductive system

disease/female, diagnosis

Vaginosis, Bacterial (MeSH)

IT Diseases

trichomoniasis: parasitic disease

Trichomonas Infections (MeSH)

IT Chemicals & Biochemicals

biogenic amine

IT Methods & Equipment

ion mobility **spectrometry**: clinical techniques,
diagnostic techniques, spectrum analysis techniques; Amsel test:
clinical techniques, diagnostic techniques

L9 ANSWER 3 OF 7 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Atmospheric pressure ionization time-of-flight mass **spectrometry**
coupled with fast liquid chromatography for quantitation and accurate mass
measurement of five pharmaceutical drugs in human plasma.

AB The quantitative determination and accurate mass **measurement** of
five tricyclic **amine** pharmaceutical drugs (doxepin, desipramine,

imipramine, amitriptyline and trimipramine) fortified in human plasma within a per sample run time of 18 s was accomplished by atmospheric pressure ionization (API) time-of-flight (TOF) mass **spectrometry** using a turboionspray liquid chromatography/mass **spectrometry** (LC/MS) interface coupled with high-performance liquid chromatography (HPLC). The relatively short HPLC separation (18 s) was achieved using a short. . . maintained at a flow-rate of 1.4 ml min⁻¹. An acquisition speed of 0.2 s per spectrum accommodates these fast separation **conditions**. This method employs a one-step liquid-liquid extraction procedure to isolate the five tricyclic amines from biological matrix components. The overall. . . and accuracy (0.2-14.5%) were obtained. The linear dynamic range was extended to 200 based on a software upgrade for correcting **ion** current detection saturation. The accurate masses of the five tricyclic amines were determined by on-line LC/TOFMS analyses of biological extracts. . .

IT . . . Equipment

API-TOF mass spectrometer: equipment; high performance liquid chromatography [HPLC]: liquid chromatography, separation method; liquid chromatography-atmospheric pressure ionization time-of-flight mass **spectrometry** [LC-API-TOF-MS]: Spectrum Analysis Techniques, analytical method; liquid-liquid extraction: Extraction, Isolation, Purification and Separation Techniques, extraction method

L9 ANSWER 4 OF 7 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI **Determination** of heterocyclic aromatic **amines** in meat extracts by liquid chromatography-**ion**-trap atmospheric pressure chemical ionization mass **spectrometry**.

AB When protein-rich foods are processed under normal cooking **conditions**, heterocyclic aromatic amines (HAAs) can be generated at a few parts per billion level. In this work, we have analyzed. . . time has been greatly reduced. Problems derived from the less exhaustive purification of the extract have been solved by using MS(**ion** trap) detection. The RSD for quantification ranged from 2.1% to 5.1% for run-to-run precision and from 5.2% to 11% for. . .

IT Methods & Equipment

HPLC [high performance liquid chromatography]: liquid chromatography, separation method; Pharmacia LKB HPLC system: equipment; **ion** trap atmospheric pressure chemical ionization mass **spectrometry** [IT-APCI-MS]: analytical method, spectroscopic techniques: CB

IT Miscellaneous Descriptors

meat: meat

L9 ANSWER 5 OF 7 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Liquid chromatography-atmospheric-pressure chemical ionization mass **spectrometry** as a routine method for the **analysis** of mutagenic **amines** in beef extracts.

AB A liquid chromatography-mass **spectrometry** (LC-MS) method using atmospheric-pressure chemical ionization as interface was developed for the simultaneous determination of 14 heterocyclic aromatic amines and. . . spectra were optimized, and the effect of the variation of cone voltage on the mass spectra was studied. The (M+H)⁺ **ions** and some fragments produced in the source were observed in the mass spectra when several extraction voltages were applied. Quality parameters (run-to-run and day-to-day reproducibility, intervals of linearity, and limits of detection) were studied in the optimum working **conditions**. The method was used to **analyze** the heterocyclic **amines** present in a commercial beef extracts. Therefore, a solid-phase extraction clean-up procedure was performed prior to the LC-MS analysis due. . .

IT Miscellaneous Descriptors

ANALYSIS; ANALYTICAL METHOD; BEEF EXTRACTS; FOOD MUTAGEN; FOODS; HARMAN; HETEROCYCLIC AMINES; LIQUID CHROMATOGRAPHY-ATMOSPHERIC PRESSURE CHEMICAL IONIZATION MASS **SPECTROMETRY**; METHODOLOGY; NORHARMAN; TOXICOLOGY; 2-AMINO-1-METHYL-6-PHENYLMIDAZO(4,5-B)PYRIDINE; 2-AMINO-3-METHYL-9H-PYRIDO(2,3-B)INDOLE; 2-AMINO-3-METHYLMIDAZO(4,5-

F) QUINOLINE; 2-AMINO-3,4-DIMETHYLIMIDAZO(4,5-F)QUINOLINE;
 2-AMINO-3,4,7,8-TETRAMETHYLIMIDAZO(4,5-F)QUINOXALINE;
 2-AMINO-3,4,8-TRIMETHYLIMIDAZO(4,5-F)QUINOXALINE; 2-AMINO-3,7,8-
 TRIMETHYLIMIDAZO(4,5-F)QUINOXALINE; 2-AMINO-3,8-DIMETHYLIMIDAZO(4,5-
 F)QUINOXALINE; 2-AMINO-6-METHYLDIPYRIDO(1,2-A:3',2'-D)IMIDAZOLE;
 2-AMINO-9H-PYRIDO(2,3-B)INDOLE; 3-AMINO-1-METHYL-5H-PYRIDO(4,3-B)INDOLE;
 3-AMINO-1,4-DIMETHYL-5H-PYRIDO(4,3-B)INDOLE

L9 ANSWER 6 OF 7 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI **Determination of heterocyclic amines** by pneumatically
 assisted electrospray liquid chromatography-mass **spectrometry**.
 AB Electrospray ionization mass **spectrometry** was applied to the
 study of the amines IQ, Trp-P-1, Trp-P-2, PhIP and A-alpha-C and the
 co-mutagens harman and norharman. . . . The results obtained on a triple
 quadrupole mass spectrometer equipped with a pneumatically assisted
 electrospray source are reported. The chromatographic **conditions**
 were optimized with a reversed-phase column (1 mm I.D.) using
 acetonitrile-5 mM ammonium acetate (pH 6.7) (50:50) as the mobile. . . .
 of 50 μ -l min⁻¹. Different parameters influencing the mass spectra were
 investigated. For these compounds (M + H)⁺ in the positive-ion
 mode and also some fragments produced through collisionally activated
 decomposition in the interface were observed. Detection limits of 5.4-44
 pg were obtained for standard solutions of these amines. Analysis of a
 meat extract was performed by HPLC-MS using single-ion
 monitoring after a solid-phase extraction clean-up.

L9 ANSWER 7 OF 7 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 TI DETERMINATION OF PRIMARY AND SECONDARY ALIPHATIC AMINES IN THE ENVIRONMENT
 AS SULFONAMIDE DERIVATIVES BY GAS CHROMATOGRAPHY-MASS **SPECTROMETRY**

AB. . . developed. A standard solution of amines was added to river water,
 sea water and sea sediment, and distilled under alkaline
conditions. The distillate was reacted with benzenesulphonyl
 chloride to form the corresponding sulphonamides. After extracting the
 derivatives into dichloromethane, the organic layer was concentrated to a
 definite volume. The determination was carried out by GC-MS with
 selected-ion monitoring. The **detection** limits of
amines in water and sediment were 0.02-2 μ .g/l and 0.5-50
 μ .g/kg, respectively. The recoveries were 68.4-98.8%.

=> d 19 1, 4, 5 iall

L9 ANSWER 1 OF 7 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 ACCESSION NUMBER: 2003:458361 BIOSIS
 DOCUMENT NUMBER: PREV200300458361
 TITLE: Identification of aminobiphenyl derivatives in commercial
 hair dyes.
 AUTHOR(S): Turesky, Robert J. [Reprint Author]; Freeman, James P.;
 Holland, Ricky D.; Nestorick, Daniel M.; Miller, Dwight W.;
 Ratnasinghe, D. Luke; Kadlubar, Fred F.
 CORPORATE SOURCE: Division of Chemistry, National Center for Toxicological
 Research, 3900 NCTR Road, Jefferson, AR, 72079, USA
 RTuresky@nctr.fda.gov
 SOURCE: Chemical Research in Toxicology, (September 2003) Vol. 16,
 No. 9, pp. 1162-1173. print.
 ISSN: 0893-228X (ISSN print).
 DOCUMENT TYPE: Article
 LANGUAGE: English
 ENTRY DATE: Entered STN: 8 Oct 2003
 Last Updated on STN: 8 Oct 2003

ABSTRACT: A recent epidemiological study suggested that aromatic amines present
 in hair dyes may contribute to an increased risk of bladder cancer
 (Gago-Dominguez, et al. (2003) Carcinogenesis 24, 483-489). Moreover, a
 preliminary study linked frequent hair dye usage with elevated levels of DNA

adducts of 4-aminobiphenyl (4-ABP) in human epithelial breast cells (Gorlewska, et al. Proc. Am. Assoc. Cancer Res. 43, 1018-1019). Therefore, we sought to determine if 4-ABP, a recognized human urinary bladder carcinogen, is present in commercial hair dyes. 4-ABP was isolated from dyes by solvent extraction with hexane, followed by silica gel chromatography, either with or without chemical treatment of the extract with Zinc/HCl, and a final purification with a mixed cation exchange reversed-phase resin. The identity of 4-ABP was confirmed by both HPLC with electrospray ionization tandem mass **spectrometry** (HPLC-ESI-MS/MS) and gas chromatography with negative **ion** chemical ionization mass **spectrometry** (GC-NICI-MS) following chemical derivatization with pentafluoropropionic anhydride (PFPA). The levels of 4-ABP ranged from not detectable (<0.29 parts per billion (ppb)) up to 12.8 ppb. The noncarcinogenic isomer 2-aminobiphenyl (2-ABP) was also found at quantities up to 310 ppb. 4-ABP was detected in eight of the 11 hair dyes and found in black, red, and blonde hair dyes but not in brown hair dyes. 1,4-Phenylenediamine (PPD) is a key constituent for color development of many permanent hair dyes. Some batches of chemical research grade PPD were contaminated with 4-ABP (up to 500 ppb) and 2-ABP (up to 70 parts per million) and may be a source of ABP contamination in hair dyes. These analytical data demonstrate that 4-ABP is present in some hair dyes. Studies on dermal absorption and bioavailability of 4-ABP from hair dyes are required to **determine** if this aromatic **amine** contributes to the increased risk of bladder cancer reported in frequent users of hair dyes.

CONCEPT CODE: General biology - Miscellaneous 00532
 Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
 Urinary system - Pathology 15506
 Toxicology - General and methods 22501
 Neoplasms - Pathology, clinical aspects and systemic effects 24004
 Neoplasms - Carcinogens and carcinogenesis 24007

INDEX TERMS: Major Concepts
 Cosmetics; Toxicology; Tumor Biology

INDEX TERMS: Diseases
 bladder cancer: neoplastic **disease**, urologic **disease**
 Bladder Neoplasms (MeSH)

INDEX TERMS: Chemicals & Biochemicals
 1,4-phenylenediamine; 4-aminobiphenyl: carcinogen; DNA adducts; aminobiphenyl derivatives: identification; commercial hair dyes; hexane; pentafluoropropionic anhydride

ORGANISM: Classifier
 Hominidae 86215
 Super Taxa
 Primates; Mammalia; Vertebrata; Chordata; Animalia
 Organism Name
 human (common)
 Taxa Notes
 Animals, Chordates, Humans, Mammals, Primates, Vertebrates

REGISTRY NUMBER: 106-50-3 (1,4-phenylenediamine)
 92-67-1 (4-aminobiphenyl)
 41674-04-8D (aminobiphenyl derivatives)
 110-54-3 (hexane)
 356-42-3 (pentafluoropropionic anhydride)

L9 ANSWER 4 OF 7 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
 ACCESSION NUMBER: 2000:151485 BIOSIS
 DOCUMENT NUMBER: PREV200000151485
 TITLE: **Determination** of heterocyclic aromatic **amines** in meat extracts by liquid chromatography-ion-trap atmospheric pressure chemical ionization mass **spectrometry**.

AUTHOR(S): Toribio, F.; Moyano, E.; Puignou, L. [Reprint author];

CORPORATE SOURCE: Galceran, M. T.
Departament de Quimica Analitica, Universitat de Barcelona,
Diagonal 647, 08028, Barcelona, Spain
SOURCE: Journal of Chromatography A, (Feb. 11, 2000) Vol. 866, No.
1-2, pp. 307-317. print.
CODEN: JOCRAM. ISSN: 0021-9673.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 19 Apr 2000
Last Updated on STN: 4 Jan 2002

ABSTRACT: When protein-rich foods are processed under normal cooking
conditions, heterocyclic aromatic amines (HAAs) can be generated at a
few parts per billion level. In this work, we have analyzed the HAAs present
in a lyophilized meat extract by means of a simplified solid-phase extraction
procedure. All the analytes were collected in a single extract with recoveries
in the range of 45.6-75.2%, so the analysis time has been greatly reduced.
Problems derived from the less exhaustive purification of the extract have been
solved by using MS (ion trap) detection. The RSD for quantification
ranged from 2.1% to 5.1% for run-to-run precision and from 5.2% to 11% for
day-to-day precision. The limits of detection for standard solutions ranged
from 20 to 150 pg injected. For the meat extract analyzed limits of detection
from 0.9 to 11.2 ng g⁻¹ were obtained. Results of the quantification are in
agreement with those obtained using different clean-up procedures.

CONCEPT CODE: Toxicology - Foods, food residues, additives and
preservatives 22502
Biochemistry methods - General 10050
Biochemistry studies - General 10060
Biophysics - General 10502
Food technology - General and methods 13502

INDEX TERMS: Major Concepts
Biochemistry and Molecular Biophysics; Foods; Methods
and Techniques; Toxicology

INDEX TERMS: Chemicals & Biochemicals
heterocyclic aromatic amines: Toronto Research Chemicals
Inc., analysis, food residue, meat extracts, separation

INDEX TERMS: Methods & Equipment
HPLC [high performance liquid chromatography]: liquid
chromatography, separation method; Pharmacia LKB HPLC
system: equipment; ion trap atmospheric
pressure chemical ionization mass spectrometry
[IT-APCI-MS]: analytical method, spectroscopic
techniques: CB

INDEX TERMS: Miscellaneous Descriptors
meat: meat

L9 ANSWER 5 OF 7 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1997:463516 BIOSIS
DOCUMENT NUMBER: PREV199799762719
TITLE: Liquid chromatography-atmospheric-pressure chemical
ionization mass spectrometry as a routine method
for the analysis of mutagenic amines in
beef extracts.

AUTHOR(S): Pais, P.; Moyano, E.; Puignou, L.; Galceran, M. T. [Reprint
author]

CORPORATE SOURCE: Dep. Quimica Analitica, Univ. Barcelona, Av. Diagonal 647,
08028 Barcelona, Spain

SOURCE: Journal of Chromatography A, (1997) Vol. 778, No. 1-2, pp.
207-218.

CODEN: JOCRAM. ISSN: 0021-9673.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 27 Oct 1997

Last Updated on STN: 27 Oct 1997

ABSTRACT: A liquid chromatography-mass spectrometry (LC-MS) method
using atmospheric-pressure chemical ionization as interface was developed for

the simultaneous determination of 14 heterocyclic aromatic amines and related compounds in beef extracts. The separation was performed on a conventional C-18 column using a binary mobile phase composed of acetonitrile and 50 mM ammonium acetate at pH 5.7, and elution was carried out in gradient mode. Several parameters influencing the mass spectra were optimized, and the effect of the variation of cone voltage on the mass spectra was studied. The (M+H)+ **ions** and some fragments produced in the source were observed in the mass spectra when several extraction voltages were applied. Quality parameters (run-to-run and day-to-day reproducibility, intervals of linearity, and limits of detection) were studied in the optimum working conditions. The method was used to **analyze** the heterocyclic amines present in a commercial beef extracts. Therefore, a solid-phase extraction clean-up procedure was performed prior to the LC-MS analysis due to the complexity of the sample and the compounds Glu-P-1, Harman, Norharman and A-alpha-C were identified in the samples at ppb levels and successfully confirmed using in-source fragmentation.

CONCEPT CODE: Biochemistry methods - General 10050
 Biophysics - Methods and techniques 10504
 Food technology - Meats and meat by-products 13516
 Food technology - Evaluations of physical and chemical properties 13530
 Toxicology - Foods, food residues, additives and preservatives 22502

INDEX TERMS: Major Concepts
 Biochemistry and Molecular Biophysics; Foods; Methods and Techniques; Toxicology

INDEX TERMS: Chemicals & Biochemicals
 2-AMINO-3-METHYLIMIDAZO(4,5-F)QUINOLINE;
 2-AMINO-3,4-DIMETHYLIMIDAZO(4,5-F)QUINOLINE;
 2-AMINO-3,8-DIMETHYLIMIDAZO(4,5-F)QUINOXALINE;
 3-AMINO-1,4-DIMETHYL-5H-PYRIDO(4,3-B)INDOLE;
 3-AMINO-1-METHYL-5H-PYRIDO(4,3-B)INDOLE;
 2-AMINO-6-METHYLDIPYRIDO(1,2-A:3',2'-D)IMIDAZOLE;
 HARMAN; NORHARMAN

INDEX TERMS: Miscellaneous Descriptors
 ANALYSIS; ANALYTICAL METHOD; BEEF EXTRACTS; FOOD MUTAGEN; FOODS; HARMAN; HETEROCYCLIC AMINES; LIQUID CHROMATOGRAPHY-ATMOSPHERIC PRESSURE CHEMICAL IONIZATION MASS SPECTROMETRY; METHODOLOGY; NORHARMAN; TOXICOLOGY; 2-AMINO-1-METHYL-6-PHENYLIMIDAZO(4,5-B)PYRIDINE; 2-AMINO-3-METHYL-9H-PYRIDO(2,3-B)INDOLE; 2-AMINO-3-METHYLIMIDAZO(4,5-F)QUINOLINE; 2-AMINO-3,4-DIMETHYLIMIDAZO(4,5-F)QUINOLINE; 2-AMINO-3,4,7,8-TETRAMETHYLIMIDAZO(4,5-F)QUINOXALINE; 2-AMINO-3,4,8-TRIMETHYLIMIDAZO(4,5-F)QUINOXALINE; 2-AMINO-3,7,8-TRIMETHYLIMIDAZO(4,5-F)QUINOXALINE; 2-AMINO-3,8-DIMETHYLIMIDAZO(4,5-F)QUINOXALINE; 2-AMINO-6-METHYLDIPYRIDO(1,2-A:3',2'-D)IMIDAZOLE; 2-AMINO-9H-PYRIDO(2,3-B)INDOLE; 3-AMINO-1-METHYL-5H-PYRIDO(4,3-B)INDOLE; 3-AMINO-1,4-DIMETHYL-5H-PYRIDO(4,3-B)INDOLE

REGISTRY NUMBER: 76180-96-6 (2-AMINO-3-METHYLIMIDAZO(4,5-F)QUINOLINE)
 62450-07-1 (3-AMINO-1-METHYL-5H-PYRIDO(4,3-B)INDOLE)
 486-84-0 (HARMAN)
 244-63-3 (NORHARMAN)
 62450-06-0 (3-AMINO-1,4-DIMETHYL-5H-PYRIDO(4,3-B)INDOLE)
 67730-11-4 (2-AMINO-6-METHYLDIPYRIDO(1,2-A:3',2'-D)IMIDAZOLE)
 77094-11-2 (2-AMINO-3,4-DIMETHYLIMIDAZO(4,5-F)QUINOLINE)
 77500-04-0 (2-AMINO-3,8-DIMETHYLIMIDAZO(4,5-F)QUINOXALINE)

=> log y
 COST IN U.S. DOLLARS

SINCE FILE TOTAL
 ENTRY SESSION

FULL ESTIMATED COST

61.07

61.28

STN INTERNATIONAL LOGOFF AT 13:35:17 ON 07 JAN 2004